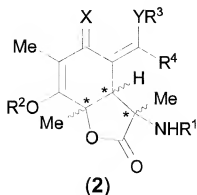


In the Claims

This listing of claims will replace all prior versions and listings of claims in this application.

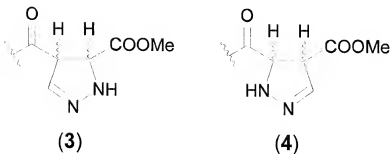
1-23 (Cancelled).

24 (Previously presented). A compound of the general formula (2):



wherein

R¹ is selected from the group consisting of: -H, (C₁-C₁₀)-alkyl (wherein alkyl is straight or branched), (C₃-C₁₀)-alkenyl, and acyl groups, wherein free -COOH-groups can be present on the acyl group in the form of esters; or, optionally, R¹ can be (3) or (4)



R^2 is selected from the group consisting of: $-H$, (C_1-C_{10}) -alkyl (wherein alkyl is straight or branched), and acyl groups;

R^3 is selected from the group consisting of: $-H$, (C_1-C_{10}) -alkyl (wherein alkyl is straight or branched), and acyl groups;

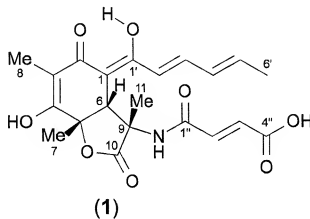
R^4 is selected from the group consisting of: (C_1-C_{10}) -alkyl (wherein alkyl is straight or branched), and (C_3-C_{10}) -alkenyl, wherein the alkenyl residue can contain one or more double bonds;

X is selected from the group consisting of O , S , NOH and NOR^5 , wherein R^5 is a straight chain or branched chain (C_1-C_6) -alkyl;

Y is O , or Y and X are N -atoms bound to each other thus forming a pyrazole ring;

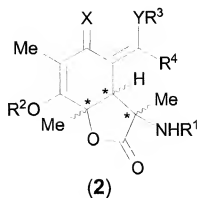
wherein the compound can be present as an (R,R,R) -, (R,R,S) -, (R,S,R) -, (R,S,S) -, (S,R,R) -, (S,R,S) -, (S,S,R) - or (S,S,S) -stereoisomer; and pharmaceutically acceptable salts or solvates of (2).

25 (currently amended). The compound according to claim 24 having the formula (1):



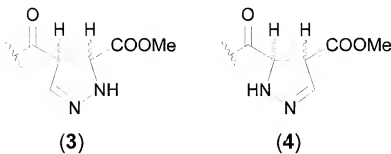
(sorbicillactone A) ~~and derivatives thereof~~, their diastereomers, as well as the corresponding enantiomers, and pharmaceutically acceptable salts or solvates of this compound.

26 (Previously presented). A method for the production of a compound of the general formula (2):



wherein

R^1 is selected from the group consisting of: $-H$, (C_1-C_{10}) -alkyl (wherein alkyl is straight or branched), (C_3-C_{10}) -alkenyl, and acyl groups, wherein free $-COOH$ -groups can be present on the acyl group in the form of esters; or, optionally, R^1 can be (3) or (4)



R^2 is selected from the group consisting of: $-H$, (C_1-C_{10}) -alkyl (wherein alkyl is straight or branched), and acyl groups;

R^3 is selected from the group consisting of: $-H$, (C_1-C_{10}) -alkyl (wherein alkyl is straight or branched), and acyl groups;

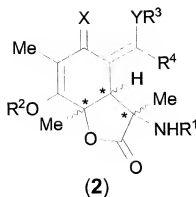
R^4 is selected from the group consisting of: (C_1-C_{10}) -alkyl (wherein alkyl is straight or branched), and (C_3-C_{10}) -alkenyl, wherein the alkenyl residue can contain one or more double bonds;

X is selected from the group consisting of O , S , NOH and NOR^5 , wherein R^5 is a straight chain or branched chain (C_1-C_6) -alkyl;

Y is O, or Y and X are N-atoms bound to each other thus forming a pyrazole ring;
wherein the compound can be present as an (*R,R,R*)-, (*R,R,S*)-, (*R,S,R*)-, (*R,S,S*)-, (*S,R,R*)-, (*S,R,S*)-, (*S,S,R*)- or (*S,S,S*)-stereoisomer; and pharmaceutically acceptable salts or solvates of (2);
wherein said method comprises growing a fungus of the genus *Penicillium* in a marine organism and isolating said compound from the culture medium and/or the fungal biomass.

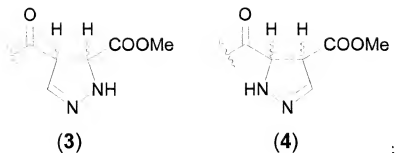
27 – 28 (Cancelled).

29 (Previously presented). A method for the biomimetic synthesis of a compound of the general formula (2):



wherein

R¹ is selected from the group consisting of: -H, (C₁-C₁₀)-alkyl (wherein alkyl is straight or branched), (C₃-C₁₀)-alkenyl, and acyl groups, wherein free -COOH-groups can be present on the acyl group in the form of esters; or, optionally, R¹ can be (3) or (4)



R² is selected from the group consisting of: -H, (C₁-C₁₀)-alkyl (wherein alkyl is straight or branched), and acyl groups;

R³ is selected from the group consisting of: -H, (C₁-C₁₀)-alkyl (wherein alkyl is straight or branched), and acyl groups;

R⁴ is selected from the group consisting of: (C₁-C₁₀)-alkyl (wherein alkyl is straight or branched), and (C₃-C₁₀)-alkenyl, wherein the alkenyl residue can contain one or more double bonds;

X is selected from the group consisting of O, S, NOH and NOR⁵, wherein R⁵ is a straight chain or branched chain (C₁-C₆)-alkyl;

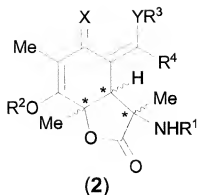
Y is O, or Y and X are N-atoms bound to each other thus forming a pyrazole ring;

wherein the compound can be present as an (*R,R,R*)-, (*R,R,S*)-, (*R,S,R*)-, (*R,S,S*)-, (*S,R,R*)-, (*S,R,S*)-, (*S,S,R*)- or (*S,S,S*)-stereoisomer; and pharmaceutically acceptable salts or solvates of (2);

wherein said method comprises:

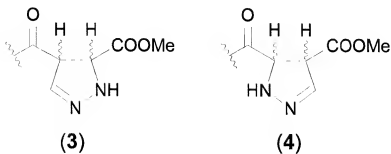
- providing sorbicillin;
- oxidative dearomatisation and subsequent addition of alanin or other amino acids; and
- subsequent attachment of fumaric acid or an analogous acyl residue.

30 (Previously presented). A pharmaceutical composition comprising a compound of the general formula (2):



wherein

R¹ is selected from the group consisting of: -H, (C₁-C₁₀)-alkyl (wherein alkyl is straight or branched), (C₃-C₁₀)-alkenyl, and acyl groups, wherein free -COOH-groups can be present on the acyl group in the form of esters; or, optionally, R¹ can be (3) or (4)



R² is selected from the group consisting of: -H, (C₁-C₁₀)-alkyl (wherein alkyl is straight or branched), and acyl groups;

R³ is selected from the group consisting of: -H, (C₁-C₁₀)-alkyl (wherein alkyl is straight or branched), and acyl groups;

R⁴ is selected from the group consisting of: (C₁-C₁₀)-alkyl (wherein alkyl is straight or branched), and (C₃-C₁₀)-alkenyl, wherein the alkenyl residue can contain one or more double bonds;

X is selected from the group consisting of O, S, NOH and NOR⁵, wherein R⁵ is a straight chain or branched chain (C₁-C₆)-alkyl;

Y is O, or Y and X are N-atoms bound to each other thus forming a pyrazole ring;

wherein the compound can be present as an (*R,R,R*)-, (*R,R,S*)-, (*R,S,R*)-, (*R,S,S*)-, (*S,R,R*)-, (*S,R,S*)-, (*S,S,R*)- or (*S,S,S*)-stereoisomer; and pharmaceutically acceptable salts or solvates of (2); together with one or more suitable excipients and additives.

31 (Previously presented). The pharmaceutical composition according to claim 30, characterised in that the compound is present in the form of a depot substance or as a precursor, together with a suitable, pharmaceutically acceptable diluent or carrier substance.

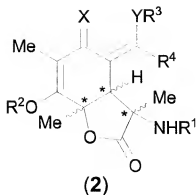
32 (Previously presented). The pharmaceutical composition according to claim 30, characterised in that the compound is present in an amount of 20 µg.

33 (Previously presented). The pharmaceutical composition according to claim 30, characterised in that the compound is present in an amount such that a concentration range of between 0.3 and 3.0 µg/ml is present at a treatment *in vivo*.

34 (Previously presented). The pharmaceutical composition according to claim 30, characterised in that it contains further chemotherapeutics.

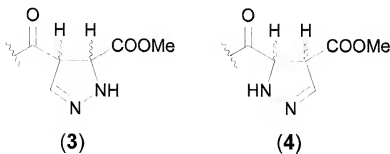
35 (Previously presented). The pharmaceutical composition according to claim 30, in the form of tablets, dragées, capsules, droplets, suppositories, preparations for injection or infusion for peroral, rectal or parenteral use.

36 (Previously presented). A method for the treatment of a disease selected from the group consisting of diseases caused by retroviruses, wherein said method comprises administering, to a patient in need of such treatment, a compound of the general formula (2):



wherein

R¹ is selected from the group consisting of: -H, (C₁-C₁₀)-alkyl (wherein alkyl is straight or branched), (C₃-C₁₀)-alkenyl, and acyl groups, wherein free -COOH-groups can be present on the acyl group in the form of esters; or, optionally, R¹ can be (3) or (4)



R² is selected from the group consisting of: -H, (C₁-C₁₀)-alkyl (wherein alkyl is straight or branched), and acyl groups;

R³ is selected from the group consisting of: -H, (C₁-C₁₀)-alkyl (wherein alkyl is straight or branched), and acyl groups;

R⁴ is selected from the group consisting of: (C₁-C₁₀)-alkyl (wherein alkyl is straight or branched), and (C₃-C₁₀)-alkenyl, wherein the alkenyl residue can contain one or more double bonds;

X is selected from the group consisting of O, S, NOH and NOR⁵, wherein R⁵ is a straight chain or branched chain (C₁-C₆)-alkyl;

Y is O, or Y and X are N-atoms bound to each other thus forming a pyrazole ring;

wherein the compound can be present as an (*R,R,R*)-, (*R,R,S*)-, (*R,S,R*)-, (*R,S,S*)-, (*S,R,R*)-, (*S,R,S*)-, (*S,S,R*)- or (*S,S,S*)-stereoisomer; and pharmaceutically acceptable salts or solvates of (2).

37 (Previously presented). The method according to claim 36, comprising administering the compound in the form of a depot substance or as a precursor, together with a suitable, pharmaceutically acceptable diluent or carrier substance.

38 (Previously presented). The method according to claim 36, wherein the retrovirus is HIV-1, and the compound is administered in a concentration range of between 0.3 and 3.0 µg/ml.

39 – 40 (Cancelled).